

Remarks

I. Status of the Application and Claims

As originally filed, the present application had a total of 18 claims. These were cancelled and replaced with claims 19-39 in a Preliminary Amendment submitted at the time of filing. Claims 32-36, 38 and 39 were withdrawn as the result of a restriction requirement and, in previous responses, claims 38 and 39 were cancelled and claims 40 and 41 were added. Thus, the claims now pending are 19-31, 37, 40 and 41. Claims 32-36 have been withdrawn but not cancelled.

II. The Amendments

No amendments have been made herein.

III. Support for Concentration Range of 2-15 Wt% Alkali Metal Silicate

Although not used in rejecting claims, the Examiner appears to suggest that the concentration range of 2-15% for metal silicates in solutions used to form the outer layer of particles may not have support in the application (see page 14 of the Office Action). In response, Applicants submit that this range is supported by page 17 of the specification, line 31-page 18, line 5. The relevant text reads as follows:

A further feature of the coated sodium percarbonate particles which is essential to the invention is that an aqueous solution containing alkali metal silicate with a concentration in the range from 2 to 20 wt. %, preferably 3 to 15 wt. % and particularly preferably 5 to 10 wt. % of alkali metal silicate is used for the preparation of the outer shell layer comprising alkali metal silicate.

Thus, 2 wt% is expressly recited as the lower limit of the concentration range and 15 wt% is expressly recited as one preferred upper limit. In addition, Applicants provide data that shows a variation in dissolving time for particles that occurs when solutions of 5, 10 and 20 wt% sodium waterglass solutions are used (see Table 1, page 25 of the application). Based upon the progressive changes in dissolution rate that occur in the range examined, it is reasonable to conclude that a 15 wt% solution will have a dissolution time intermediate between that of a 20 wt% solution and a 10 wt% solution.

The Rejections

I. Rejection of Claim Under 35 USC §102 and 103

On pages 2-10 of the Office Action, the Examiner makes rejections that are similar to those made in an Office Action mailed on May 8, 2008. Claims 19-21, 23, 26, 28-31, 40 and 41 are rejected as anticipated by, or obvious in light of, Bertsch-Frank (US 5,902,682). The Examiner argues that this reference discloses solutions for applying an outer layer to particles that fall within the scope of Applicants' claims.

Claims 19-26, 28-31, 40 and 41 are rejected based upon a combination of Bertsch-Frank and CA 2,326,560. These same references are used to reject claims 24 and 25 on page 9 of the Office Action. The Bertsch-Frank reference is relied upon for the reasons set out above and the Canadian application is cited as teaching other claim elements, such as compositions containing sodium sulfate. Elements that are not specifically taught by these references are alleged to be readily apparent based upon the teachings.

On pages 7-8 of the Office Action, claim 22 is separately rejected as being anticipated by, or obvious in light of, Bertsch-Frank. The Examiner argues that the particles taught by the reference have the same composition as those claimed and therefore would inherently have the same dissolution time. The Examiner further argues that a product-by-process claim is anticipated if the prior art discloses a product that is the same, regardless of the way in which it is made.

Finally, claims 27 and 37 are rejected based on Bertsch-Frank, or the '560 reference, in combination with Bailey, *et al.* (US 6,017,867). Bailey is cited as teaching granular detergent compositions with alkali metal percarbonates. The compositions have particles of 250-900 µm and may include hydrophobic materials such as silica.

Applicants respectfully traverse these rejections.

A. Comments re Novelty

For the most part, the rejections that have been made by the Examiner were addressed in Applicants' response filed August 8, 2008. Rather than repeat these arguments, Applicants will address the comments that appear on pages 12-14 of the Office Action concerning the reasons that the Examiner did not find Applicants' arguments to be persuasive.

One primary allegation made by the Examiner appears to be that column 10 of the Bertsch-Frank reference teaches particles having an outer layer in which sodium silicate is the main component and makes up 2 wt% of the particles. Since the particles allegedly have the same final composition as those claimed, the Examiner argues that they must inherently dissolve at the same rate. The Examiner also notes that evidence of unexpected properties cannot be used to overcome a novelty rejection.

In response, Applicants submit that the section of the reference cited by the Examiner describes the composition of the final particles. Although the reference indicates that sodium silicate in the outer layer of these particles comprises 2 wt% of the composition relative to the sodium percarbonate present, this does not, in itself, provide information concerning the concentration of sodium silicate in the solution that was used to make the outer coating. The most relevant information in this regard appears to be in column 8 of the reference, lines 22-23 and 46-52 which indicate that the sodium silicate solutions used to make the particles described in comparative examples or inventive examples are 37°Bé. As discussed in detail in the Appendix of Applicants' response filed February 26, 2008, this Bé reading would appear to be associated with a silicon dioxide concentration of greater than 20%.¹

The Examiner states that the particles disclosed in the reference must dissolve at the same rate as those claimed because they have the same final chemical composition. However, Applicants have shown that particles having the same percentage of sodium silicate in their outer layers actually dissolve at a rate that depends on the concentration of the solution that was used to make the outer layer. Thus, in Examples 1-3 of the application, particles made

¹ As discussed in Applicants response filed on August 8, 2008, column 8 of the Bertsch-Frank reference also discloses compositions having 8% sodium silicate. However, these do not appear to have been used in making the particles described in the portion of column 10 cited in the present Office Action.

from 5, 10, and 20 wt% sodium silicate solutions dissolved at different rates even though, in each case, the percentage of sodium silicate in the particles was the same. This is evidence that the particles must have structural differences that depend, at least in part, upon the way in which their outer layers are formed and that these differences affect dissolution rate. It therefore follows that dissolution rates are not an inherent property of the concentration of the components that make up particles.

Applicants do not dispute the Examiner's assertion that unexpected properties are not relevant to the novelty rejections. However, the dissolution rates disclosed in the present application are not just an unexpected property, but also evidence of physical differences in the particles themselves. Thus, the Examiner's argument that claim 22 is anticipated because it is a product-by-process claim and the product has been disclosed in the prior art is not valid. It is true that Applicants do not know the exact physical features of particles that change as a result of the way in which their outer layers are made. However, a primary purpose of product-by-process claims is to address situations such as these and it is well established that such claims may be patentable.

In discussing reasons why Applicants previous arguments were not found to be persuasive, the Examiner also refers to column 6 of the Bertsch-Frank reference, lines 1-20. However, the concentration of sodium silicate and sodium carbonate in the solutions referred to in this portion of the specification is not clear. As far as Applicants have been able to tell, the only coating solutions disclosed in Bertsch-Frank either have a sodium silicate concentration that is outside if the range required by the present claims or would result in an outer layer in which sodium silicate is not the main component.

In light of the above considerations, Applicants submit the conclusion of the Examiner that the particles disclosed by the Bertsch-Frank reference are the same as the particles claimed by Applicants is unwarranted. Applicants therefore respectfully submit that the rejection of claims on novelty grounds cannot be validly maintained.

B. Comments re Obviousness

Applicants also submit that the Bertsch-Frank reference does not render the present claims obvious either when considered alone or when considered in combination with CA 2,326,560. Since a relationship between the sodium silicate concentration of solutions used to form the outer layer of particles is not disclosed in either of the references cited, one of skill in the art would not try to improve the characteristics of sodium peroxygen particles by adjusting the concentration of these solutions. One of skill in the art might attempt to change the amount of alkali metal silicate in the outer layer itself, which was known to effect the release rate of active oxygen, but there was no suggestion in the art that particle characteristics might be changed by keeping the total amount of alkali metal silicate in the outer layer constant but changing its concentration in the solution used to prepare the outer layer.

The Examiner indicates that Applicants have failed to show different dissolution characteristics of the particles disclosed in Bertsch-Frank in a side by side experimental comparison. However, the burden of a patent applicant having to provide evidence to rebut a rejection only occurs after a *prima facie* case has been made. In the present instance, Applicants have demonstrated experimentally that the dissolution rate of particles having the same percentage of sodium silicate in their outer layers changes in response to changes in the concentration of the sodium silicate solutions used to form these layers (Table 1 of the application). They have also demonstrated that, based upon information provided in the Bertsch-Frank reference, the sodium silicate concentration in the solutions disclosed therein appears to either be substantially higher than the range recited in the present claims or to result in a final outer layer having much higher levels of sodium carbonate than sodium silicate. It is therefore respectfully submitted that a *prima facie* case of obviousness has not yet been established and that rebuttal evidence therefore does not need to be presented.

II. Double Patenting Rejection

On pages 10-11 of the Office Action, the Examiner rejects claims 19-31, 37, 40 and 41 on obviousness double patenting grounds over US application 10/539,285. As pointed out

in the information disclosure statement filed by Applicants on January 13, 2009, the application cited by the Examiner issued as US 7,435,714 on October 14, 2008.

Since the present claims may still undergo substantial amendments prior to allowance and these amendments may affect the double patenting rejection, Applicants would like to defer responding to this rejection for the present time.

Conclusion

In light of the considerations above, Applicants believe that all of the Examiner's rejections on statutory grounds have been overcome. It is therefore respectfully requested that these rejections be withdrawn and that the claims now pending be allowed. Early notice to this effect is earnestly solicited.

If, in the opinion of the Examiner, a phone call would help to expedite the prosecution of this application, the Examiner is invited to call Applicants' undersigned attorney at (240) 683-6165.

Respectfully submitted,
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